Introduction

• Data by Nunley et al. show that >90% of dialysis patients report pruritus, ranging
  from mild to severe.1

• The Kidney Disease Quality of Life 36 (KDQOL) assesses dialysis-specific, patient-reported, health-related QOL for individuals with end-stage renal disease (ESRD) who are undergoing dialysis.1,2

  – It includes the SF-12 physical and mental component scores (PCS and MCS, respectively), subscales for burden of disease, symptoms and problems (including skin itch), and effects on daily life.

  – This survey is administered yearly to all dialysis patients treated by a large
dialysis organization.

• Burden of disease subscale samples the patient’s impression of kidney disease burden
  – Interference with life
  – Time and frustration dealing with kidney disease
  – Burden to family
  – Problems with dialysis access site
  – Chest pain, shortness of breath, faintness/dizziness
  – Itchy, dry skin
  – Lack of appetite, nausea, upset stomach
  – Fatigue
  – Sleep
  – Personal appearance
  – Sex life
  – Dependence on doctors and medical staff

  – It includes the SF-12 physical and mental component scores (PCS and MCS, respectively), subscales for burden of disease, symptoms and problems (including skin itch), and effects on daily life.

• Results by Nunley et al. show that >90% of dialysis patients report pruritus, ranging
  from mild to severe.1

• ANOVAs were performed to compare scores on the Effects and Burden subscales for all patients by level of itchiness.

• Summary statistics are provided for the Symptoms subscale, which includes the itchiness question.

Objective

We hypothesized that patient-reported itch would be associated with other items of the KDQOL.

Methods

• We analyzed the association between itchiness score on the KDQOL and the component physical and mental scores reported by patients (n = 71,012) who completed the SF-12 portion of the survey between Jan 2009 and May 2012.

• ANOVAs were performed to compare scores on the Effects and Burden subscales for all patients by level of itchiness.

Results

• Thirty percent of patients reported that they were moderately to extremely bothered by itching.
  – Six out of ten patients reported some level of itching

• A significant association existed and clear trend was observed between itchiness and both PCS and MCS scores
  – Between itchiness and the Burden and Effects subscales

• Itchiness was also correlated with other questions in the Symptoms subscale.

Table 1: Association Between Itchiness and KDQOL Physical and Mental Component Scores

<table>
<thead>
<tr>
<th>Itchiness Score</th>
<th>Mean SD</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not bothered at all (N = 26,360)</td>
<td>39.29 10.66 39.22</td>
<td>32.06 10.00 34.59</td>
</tr>
<tr>
<td>Somewhat bothered (N = 21,481)</td>
<td>36.97 10.15 36.39</td>
<td>40.73 10.46 41.56</td>
</tr>
<tr>
<td>Moderately bothered (N = 21,217)</td>
<td>34.91 9.64 33.91</td>
<td>47.68 10.75 48.63</td>
</tr>
<tr>
<td>Very much bothered (N = 6,558)</td>
<td>33.14 9.26 32.28</td>
<td>44.79 11.60 44.42</td>
</tr>
<tr>
<td>Extremely bothered (N = 3,270)</td>
<td>32.18 9.53 30.51</td>
<td>43.42 11.87 42.77</td>
</tr>
</tbody>
</table>

Table 2: Association Between Itchiness and KDQOL Burden and Effects Subscales Scores

<table>
<thead>
<tr>
<th>Itchiness Score</th>
<th>Mean SD</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not bothered at all (N = 26,360)</td>
<td>57.23 29.67 56.25</td>
<td>79.46 20.66 81.25</td>
</tr>
<tr>
<td>Somewhat bothered (N = 21,481)</td>
<td>50.94 26.58 50.06</td>
<td>70.17 21.53 75.05</td>
</tr>
<tr>
<td>Moderately bothered (N = 21,217)</td>
<td>43.84 27.33 37.50</td>
<td>63.91 22.01 65.65</td>
</tr>
<tr>
<td>Very much bothered (N = 6,558)</td>
<td>39.69 26.27 31.25</td>
<td>57.92 23.08 58.36</td>
</tr>
<tr>
<td>Extremely bothered (N = 3,270)</td>
<td>32.71 27.75 25.08</td>
<td>51.85 25.39 56.06</td>
</tr>
</tbody>
</table>

Table 3: Association Between Itchiness and KDQOL Symptoms Scores

<table>
<thead>
<tr>
<th>Itchiness Score</th>
<th>Mean SD</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not bothered (N = 29,158)</td>
<td>60.75 11.08</td>
<td>67.50</td>
</tr>
<tr>
<td>Somewhat bothered (N = 22,108)</td>
<td>76.68 11.91</td>
<td>81.25</td>
</tr>
<tr>
<td>Moderately bothered (N = 11,237)</td>
<td>69.27 13.16</td>
<td>75.83</td>
</tr>
<tr>
<td>Very much bothered (N = 6,780)</td>
<td>68.65 14.94</td>
<td>72.05</td>
</tr>
<tr>
<td>Extremely bothered (N = 3,584)</td>
<td>52.36 17.93</td>
<td>54.17</td>
</tr>
</tbody>
</table>

Conclusions

• Self-reported skin itch is correlated with validated component and subscale scores on the KDQOL.

• Trends exist across all categories of itch for physical, mental, disease burden, and disease effects scores derived from the validated KDQOL; this relationship demonstrated a dose response.

• Thus, perception of skin itch is associated with other aspects of the quality of life of dialysis patients, suggesting that alleviation of itchiness symptoms may have broader impacts on life quality.

References


Acknowledgments

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